Before the
Federal Communications Commission
Washington, DC 20554

In the Matter of	)	
	)	
Restoring Internet Freedom	)	WC Docket No. 17-108

REPLY COMMENTS OF TECH KNOWLEDGE

August 30, 2017

EXECUTIVE SUMMARY

Neither the *Title II Order* nor pro-Title II commenters in this proceeding have demonstrated that the term "telecommunications" in the Communications Act is ambiguous or can plausibly be read to include broadband internet transmissions under *Chevron's* first step. No matter how important the policy issues raised by net neutrality might be or how circumstances might have changed, the Commission has no power to change the unambiguous meaning of the statutory definition of "telecommunications," which effectively prohibits the Commission from classifying or otherwise treating broadband internet access service as a "telecommunications service" subject to common carrier regulation under Title II. Only Congress has that power.

"Telecommunications" is a term of art that excludes internet transmissions

The term "points" in the definition of "telecommunications" is a term of art that excludes broadband internet transmissions, as demonstrated by standard canons of statutory construction, the constitutional and other public interest implications of a broad non-technical interpretation, and the structure and purpose of the Communications Act. A thorough application of these analytical tools leaves no room for doubt that interconnection with the traditional public switched ***telephone*** network has always been the *sine qua non* of "telecommunications" as defined by the Telecommunications Act of 1996.

- When Congress borrows existing terms of art, the courts give those terms their established meaning in *Chevron's* first step, absent a contrary indication in the statute.
- Congress based the 1996 Act's definitional trio of "telecommunications," "telecommunications service," and "information service" on preexisting frameworks.
- These preexisting frameworks excluded internet transmissions from common carrier regulation.

- In addition, it was well-established long before Congress adopted the 1996 Act that the term "points" as used in the Communications Act of 1934 refers to the specific ***locations*** of the originating and terminating points of a plain old telephone call.
  - From its inception in 1934, the Communications Act based its most fundamental jurisdictional distinction on the public switched telephone network's inherent ability to determine the location of the end "points" of a plain old telephone call.
  - Precedent involving the Commission's regulation of voice-over-internet-protocol services, universal service, and intercarrier compensation is premised on the impossibility of identifying the locations of end "points" of internet transmissions. The Tenth Circuit and D.C. Circuit Courts of Appeals have affirmed this interpretation of "points," and Congress acquiesced in it when Congress adopted the Twenty-First Century Communications and Video Accessibility Act of 2010.
  - It is a presumption of statutory construction that a term appearing in several places in a statutory text is generally read the same way each time it appears. The Communications Act's definitions of "wire communication," "local access and transport area," "interLATA service," and "interstate communication" all use the term "points" to refer to the originating and terminating points of a transmission; and the definitions of "LATA," "interLATA service," and "interstate transmission" all use the term "points" in relation to identifiable locations (i.e., locations that can be and are specified by users). There is no indication in the statute that the term "points" should be given a different meaning as used in the definition of "telecommunications" than it was given in these other provisions.
  - With respect to intercarrier compensation, the D.C. Circuit Court of Appeals expressly distinguished between the "telecommunications" portion of dial-up internet access — the initial telephone call to the ISP's service — and the mere "communications" portion — which begins once the ISP receives the dial-up call and begins internet transmissions. The court thus recog-

nized that, although internet transmissions are "communications," they are ***not*** "telecommunications" as defined by the Communications Act.

- Given the heavy weight of fact and precedent that the "points" of internet transmissions are unidentifiable, if Congress had intended that the term "telecommunications" be read broadly enough to encompass internet transmissions, it would not have used the term "points specified by the user" in that definition. That term alone precludes any notion that Congress left a "gap" in the definition that the Commission can fill with broadband internet transmissions.

In summary, the statutory definition of "telecommunications" is based on an acknowledgment of a real factual difference between users' ability to "specify" the "points" of transmissions on the public switched telephone network and their ***inability*** to do so with respect to broadband internet transmissions. The *Title II Order* failed to offer a reasonable explanation as to why that factual difference can simply be ignored and must therefore be reversed.

"Telecommunications" does not equal "facilities"

The *Title II Order's* broad interpretation of "telecommunications" turns it into a catch-all definition that essentially equates the term with all communications facilities, at least to the extent they are not providing "broadcasting" or traditional "cable service." The *Title II Order's* interpretation of "telecommunications" is thus effectively indistinguishable from the 9th Circuit Court of Appeals' decision in *AT&T Corp. v. City of Portland*, which concluded that the term "via telecommunications" in the definition of "information services" modifies the term "telecommunications" such that the latter term refers to "pipes" (i.e., facilities) rather than a type of "transmission" as required by the latter term's actual language. This holding is not binding on the Commission, however, because, as explained by the Supreme Court in *Brand X*, nothing in *City of Portland* indicates that the term "telecommunications" unambiguously requires the court's construction. According to

the plain language of the definition of "telecommunications" and Commission precedent, the term "telecommunications" defines a specific type of transmission, not facilities generally.

Brand X and *USTA* do not apply

The Supreme Court's holding in *Brand X* and the D.C. Circuit Court's opinion in *USTA* do not bind the Commission's interpretation of the term "telecommunications." *Brand X* held that a judicial construction of a statute does not trump an agency's unless the court holds the statute unambiguously requires the court's construction. The *Brand X* decision did not hold that cable broadband uses "telecommunications" or that all "information services" uses "telecommunications," let alone that either does so "unambiguously." The Court merely assumed without deciding that cable broadband uses "telecommunications" because the parties had conceded the point. The USTA court took the same approach — assuming without deciding that broadband internet transmissions meet the statutory definition of "telecommunications." Both courts thus had no occasion to consider the meaning of the term "telecommunications" at all, much less to determine that its statutory definition unambiguously demands a construction that includes broadband internet transmission. The *Brand X* Court's consideration of consumers' perception of a broadband service offering is simply irrelevant to whether a particular transmission meets the technical definition of "telecommunications" in the statute.

Computer II's unbundling obligations do not apply

Precedent relating to the classification of unbundled facilities is irrelevant to services that are not subject to unbundling requirements. When the multipurpose facilities that are used for an information service are unbundled, the temporal component of the information service and any other services the facilities are capable of providing — i.e., the fact that multi-purpose facilities will receive different regulatory classification and treatment depending on the service they are providing ***at a***

given time — are also separated from the underlying facility. In these circumstances, the Commission has historically treated the offering of the unbundled facility itself as subject to common carrier regulation as a "telecommunications service" even when, as a factual matter, no "transmission" of ***any*** kind is being offered by a carrier that unbundles only its facilities. In other words, the Commission treated the offering of bare facilities as subject to common carrier regulation because the facilities could be used (and typically were used) to provide plain old telephone service (i.e., "telecommunications").

Facilities-based telephone companies were traditionally required to unbundle their facilities based on their status as monopolists, not on the Commission's analysis of broadband internet or any other type of transmission; and the Commission established its *Computer II* regulations pursuant to its ancillary jurisdiction under Title I, not because facilities-based internet access service providers were considered to be common carriers subject to Title II regulation. The Commission's *Computer II* unbundling of basic services was thus separate and distinct from the unbundling obligations created in section 47 U.S.C. Section 251(c)(3) of the Communications Act in 1996. Confusion over this distinction and the Commission's traditional rationale for regulating facilities unbundling best explains its "classification" of xDSL in the 1998 *Advanced Services Order*.

The *Title II Order* is inconsistent with the statutory scheme

Even after its most comprehensive update in 1996, the Communications Act retained Congress's traditional approach of regulating different communications services using technical definitions that generally correspond to specific types of ***transmissions***: "telecommunications" transmissions in Title II; "broadcasting," "television service," and "mobile" transmissions in Title III; and "cable" transmissions in Title VI. The *Title II Order's* determination that internet transmissions are "telecommunications" because consumers would be upset if their internet transmissions did not reach their intended recipients is so broad that it encompasses nearly all communications transmis-

sions, because the same reasoning is applicable to *any* "mobile service" or "wire communication" transmission, including "cable service." If the bare fact that internet transmissions successfully facilitate "two-way" communications were enough to define them as "telecommunications" under Title II, the Act's definitional schema would be rendered meaningless: *All* facilities-based, "two way" communications transmissions would be subject to common carriage, including mass media communications. Such a broad result is inconsistent with the frameworks on which the 1996 Act's definitions of "telecommunications," "telecommunications service," and "information service" were based, and implicates the First Amendment in ways that Congress clearly did not intend. There is no indication in these definitions or their preceding frameworks that Congress intended the definition of "telecommunications" to be a catch-all for all "two-way" communications transmissions.

The *Title II Order* is also inconsistent with Congress' intent that state regulators have a meaningful role in implementing Title II. The *Title II Order* made clear that the Commission would continue to preempt state regulation of internet transmissions. Given the impending shut down of the plain old telephone network, the *Title II Order* has the effect of cutting the states out of the Title II regulatory scheme entirely. First, because the preservation of state authority in Section 152(b) of the Act is a "rule of statutory construction," it ***precludes*** the Commission from construing an (allegedly) ambiguous statutory provision (in this case, the definition of "telecommunications") in a manner that restricts state regulatory authority. Second, it is unreasonable to believe that, through an alleged ambiguity (or "gap") in the definition of "telecommunications," Congress intended to provide the Commission with authority to fill that gap by regulating broadband networks under Title II while simultaneously eliminating any meaningful exercise of state authority over such networks. It would be absurd to conclude that Congress intended to hide a near total abrogation of state power over communications regulation in such a tiny mousehole given Section 152(b)'s explicit preservation of state authority.

BIAS is either an "information service" or a "communication by radio or wire"

The term "via telecommunications" in in the definition of "information service" is not an insurmountable obstacle to classifying BIAS as an "information service." First, there is no indication that Congress intended to modify the Act's explicit definition of "telecommunications" by using the term "via telecommunications" in the definition of "information service." Second, in the *Non-Accounting Safeguards Remand*, the Commission concluded that that the term "via telecommunications" does not have a substantively material effect on the definition of "information service." A service can thus be an "information service" even if it is not delivered "via telecommunications."

The *Title II Order's* gatekeeper analysis contradicts precedent

The *Title II Order's* conclusion that BIAS providers have the ability to act as as 'gatekeepers' "regardless of the competition in the local market for broadband Internet access" contradicted the D.C. Circuit's precedent addressing bottleneck power without discussing that precedent; and Judge Tatel's opinions in *Verizon v. FCC* and *United States Telecom Ass'n v. FCC* contradicted the same precedent without attempting to distinguish or overrule it. This was arbitrary and capricious decisionmaking that justifies overturning the *Title II Order*.

The *Title II Order's* 'gatekeeper' conclusion relied on the switching cost analysis in the Commission's 2010 *Open Internet Order*. That analysis concluded, and *Verizon v. FCC* saw no basis for questioning this conclusion, that end users are unlikely to switch BIAS providers in response to the imposition of restrictions on edge content and applications. In *Comcast Corp. v. FCC*, however, the D.C. Circuit Court of Appeals reached the exact opposite conclusion with respect to switching in the cable video context. The court concluded it was arbitrary and capricious for the Commission to determine that cable subscribers were unlikely to switch in response to a cable operator's content decisions when nearly 50% of satellite video subscribers had previously been cable subscribers.

Empirical evidence of switching among mobile BIAS providers is even stronger than the record evidence of switching in the *Comcast* case. According to the Commission's most-recent annual mobile competition report, about 23% of mobile subscribers switch providers *every year*. Similarly, according to a survey conducted by the Commission itself, about 33% of wireline internet users changed their service provider in the prior three years, with 13% of subscribers switching wireline BIAS providers ***more than once*** during the three-year period. The same survey also found that, among broadband users who have a choice of ISPs, 63% said "it would be ***easy*** to switch providers," with 33% saying it would be "very easy" and 30% saying it would be "somewhat easy." In light of the court's decision in Comcast, this evidence indicates that the *Title II Order's* reliance on a switching cost rationale for finding that ISPs have 'gatekeeper' power was arbitrary and capricious and thus must be reconsidered.

The Title II Order's failure to consider the impact of competition on BIAS providers' behavior is also inconsistent with the court's holding in *Comcast* as well as Commission precedent and the economic law of demand. The "virtuous cycle" theory itself is internally inconsistent, because it posits that BIAS providers have the incentive and ability to "***choke consumer demand*** for the very broadband product" they supply, irrespective of competition, despite the fact that, according to the law of demand, competition gives BIAS providers the incentive and ability to ***increase demand*** for the very broadband product they supply. Given this contradiction, the *Title II Order* implicitly found that that the law of demand does not apply to BIAS — an implicit finding that contradicts Commission and court precedent that the law of demand applies to cable and telephony services, precedent that is embodied in the express purposes of the 1996 Act.

ANALYSIS

The definition of "telecommunications" is a term of art

Several commenters support the *Title II Order's*[1] conclusion that broadband internet access service (BIAS) meets the "telecommunications" definition's requirements merely because BIAS (usually) takes users to the websites associated with the URLs they enter into their browsers.[2] They argue that the FCC has failed to "demonstrate why a more technical reading of this term is warranted."[3]

The term "points" in the definition of "telecommunications" has a technical meaning

The following discussion demonstrates that a technical reading of "telecommunications" is ***unambiguously*** required by standard canons of statutory construction, the constitutional and other public interest implications of a non-technical interpretation, and the structure and purpose of the Communications Act, as amended by the Telecommunications Act of 1996.[4] An analysis of these factors leaves no room for doubt that interconnection with the traditional public switched ***telephone*** network has always been the *sine qua non* of "telecommunications" as defined in the 1996 Act.

If statutory terms were considered in the abstract, the *Title II Order's* conclusion that "the term 'points specified by the user' is ambiguous"[5] might seem reasonable. As noted in Tech Knowledge's initial comments in this proceeding, however, Congress was not writing on a clean slate when

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[1] Protecting and Promoting the Open Internet, WC Docket No. 14-28, Report and Order on Remand, Declaratory Ruling, and Order, FCC 15-24, 30 FCC Rcd. 5601 at ¶ 361 (2015) (*Title II Order*).

[2] *See, e.g.*, Comments of Public Knowledge and Common Cause [Update Version], WC Docket No. 17-108, filed July 19, 2017, at p. 21 (stating that a "'point' is not the precise server, or data center, or the sector of a hard drive where particular content is stored—it is just the intended recipient of content or the service the user has chosen to interact with") (*Public Knowledge Comments*).

[3] *Id.*

[4] Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (1996) (1996 Act).

[5] *Title II Order* at ¶ 361.

it adopted the definitional trio of "telecommunications,"[6] "telecommunications service,"[7] and "information service"[8] in the 1996 Act.[9] It based these definitions on "frameworks established prior to the passage of the 1996 Act"[10] that were established in the Commission's *Computer II* proceeding[11] and the *Modification of Final Judgment* (or "MFJ") that divested the Bell Operating Companies from AT&T.[12] It is a rule of statutory construction that "technical terms of art should be interpreted by reference to the trade or industry to which they apply."[13] In *Chevron's* first step, the courts "give technical terms of art their established meaning absent a contrary indication in the statute."[14] As the Supreme Court noted long ago, "where Congress borrows terms of art in which are accumulated the legal tradition and meaning of centuries of practice, it presumably knows and adopts the cluster of ideas that were attached to each borrowed word in the body of learning from which it was taken and the meaning its use will convey to the judicial mind unless otherwise instructed."[15] The courts "assume that Congress is aware of existing law when it passes legislation,"[16] and decades of precedent prior to the adoption of the 1996 Act demonstrate that the term "telecommunications" was intend-

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[6] 47 U.S.C. § 153(50).

[7] 47 U.S.C. § 153(53).

[8] 47 U.S.C. § 153(24).

[9] Comments of Tech Knowledge, WC Docket No. 17-108, filed July 17, 2017, at p. 4 (*Tech Knowledge Comments*).

[10] Federal-State Joint Board on Universal Service, CC Docket No. 96-45, FCC 98-67, Report to Congress, 13 FCC Rcd. 11501 at ¶ 21 (1998) (*Stevens Report*).

[11] Amendment of Section 64.702 of the Commission's Rules and Regulations (Second Computer Inquiry), Final Decision, 77 F.C.C.2d 384 (1980).

[12] *United States v. Am. Tel. & Tel. Co.*, 552 F. Supp. 131, 135 (D.D.C. 1982), *aff'd sub nom. Maryland v. United States,* 460 U.S. 1001, 103 S. Ct. 1240, 75 L. Ed. 2d 472 (1983), and *amended sub nom. United States v. W. Elec. Co.*, 714 F. Supp. 1 (D.D.C. 1988), *aff'd in part, rev'd in part sub nom. United States v. W. Elec. Co.*, 900 F.2d 283 (D.C. Cir. 1990), and *modified sub nom. United States v. W. Elec. Co.*, 890 F. Supp. 1 (D.D.C. 1995), *vacated*, 84 F.3d 1452 (D.C. Cir. 1996) (*Modification of Final Judgment*).

[13] *Louisiana Pub. Serv. Comm'n v. FCC*, 476 U.S. 355, 372, 106 S. Ct. 1890, 1900, 90 L. Ed. 2d 369 (1986).

[14] *In re FCC 11-161*, 753 F.3d 1015, 1116 (10th Cir. 2014).

[15] *Morissette v. United States*, 342 U.S. 246, 263, 72 S. Ct. 240, 96 L. Ed. 288 (1952).

[16] *Miles v. Apex Marine Corp.*, 498 U.S. 19, 32, 111 S. Ct. 317, 112 L. Ed. 2d 275 (1990).

ed to have a technical meaning (as described in Tech Knowledge's initial comments) that exempts end users' internet transmissions from common carriage regulation.[17]

This unambiguous construction of the term "telecommunications" is the ***only*** interpretation that harmonizes the many decisions of the Commission and the courts regarding the 1996 Act's definitional trio, and it is the only interpretation that does so in a way that avoids the game of political ping-pong enabled by previous decisions' focus on the meaning of "telecommunications service."

End-to-end analysis

From its inception in 1934, the Communications Act based its most fundamental jurisdictional distinction on the plain old public switched telephone network's (PSTN) ability to determine the end "points" of a telephone call.[18] The 1934 Act grants the Commission authority to regulate "interstate and foreign commerce in wire and radio communication"[19] while expressly denying the Commission "jurisdiction with respect to ... intrastate communication service...."[20] According to the Supreme Court, this "system of dual state and federal regulation over telephone service" requires federal and state regulators to exercise their jurisdiction based on the geographic location of the end "points" of "telephone communications" on the PSTN.[21] The Supreme Court has thus held that, with respect to plain old telephone service (POTS), it is not only "possible" to determine the end

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[17] *See, e.g., Johnson v. United States*, 529 U.S. 694, 710 (2000) ("[W]hen a new legal regime develops out of an identifiable predecessor, it is reasonable to look to the pre-cursor in fathoming the new law.").

[18] *See, e.g.*, Am. Tel. & Tel. Co., 38 F.C.C. 1127, 1134 (1965) (noting that toll charges for long distance calling included payment for all service furnished between the calling and called telephones); *Glob. Naps, Inc. v. Verizon New England*, Inc., 444 F.3d 59, 63, 72 (1st Cir. 2006) ("Under the traditional system for rating calls, whether a call is 'local' or 'interexchange' depends on ... the geographic endpoints of the call").

[19] 47 U.S.C. § 151.

[20] 47 U.S.C. § 152(b). The 1996 gave the Commission jurisdiction over some purely intrastate matters. *See Qwest Corp. v. Scott*, 380 F.3d 367, 370 n.1 (8th Cir. 2004), *citing AT&T Corp. v. Iowa Utilities Board*, 525 U.S. 366, 380, 119 S.Ct. 721, 142 L.Ed.2d 835 (1999).

[21] *See Louisiana Pub. Serv. Comm'n v. FCC*, 476 U.S. 355, 360, 106 S. Ct. 1890, 90 L. Ed. 2d 369 (1986).

points of a call, it is statutorily ***required***.[22] While it recognized that "jurisdictional tensions may arise as a result of the fact that interstate and intrastate service are provided by a single integrated system," the Court noted that "it is possible to determine that, for example, 75% of an employee's time is devoted to the production of intrastate service."[23] This "jurisdictional separations" process is possible only because "[t]he end-to-end geographic locations of traditional landline-to-landline telephone communications are readily known."[24]

VoIP decisions

It is legally significant that internet transmissions do not share this characteristic with the PSTN.[25] Indeed, decisions involving the Commission's regulatory treatment of voice-over-internet-protocol (VoIP) are ***premised*** on the impossibility of identifying the end points of internet transmissions.

In the *Pulver Order*, the Commission declared that "Free World Dialup," an "IP-to-IP" VoIP connection, is "neither 'telecommunications' nor 'telecommunications service' as defined in the Act and as interpreted by the Commission," but is "an unregulated information service subject to [exclusive] federal jurisdiction."[26] Because Free World Dialup enabled communications among multiple users at any give time, "and because these [users]' physical locations can continually change," the PSTN-approach of "looking at the end ***points*** of a communication" to determine jurisdiction (i.e.,

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[22] *See Louisiana*, 476 U.S. at 375 (holding that "it is possible to determine that, for example, 75% of an employee's time is devoted to the production of intrastate service, and only one quarter to interstate service"). The Court held that the Commission can preempt state regulation on impossibility grounds only "where it [is] *not* possible to separate the interstate and intrastate components." *Id*. At 375 n.4. *See also Illinois Bell Tel. Co. v. FCC*, 883 F.2d 104, 115 (D.C. Cir. 1989) (noting the same).

[23] *See Louisiana*, 476 U.S. at 375.

[24] *See, e.g., Minnesota Pub. Utilities Comm'n. v. FCC*, 483 F.3d 570, 574 (8th Cir. 2007).

[25] *See id.*

[26] Petition for Declaratory Ruling that pulver.com's Free World Dialup Is Neither Telecommunications Nor a Telecommunications Service, Memorandum Opinion and Order, FCC 04-27, 19 F.C.C. Rcd. 3307 at ¶ 8 (2004) (*Pulver Order*).

traditional "end-to-end" analysis) was "unhelpful."[27] The Commission's end-to-end analysis "considers the 'continuous path of communications,' beginning with the inception of a call to its completion, and has rejected attempts to divide communications at any intermediate points between providers."[28] Though this analysis has "relevance for a circuit-switched network," the Commission concluded that it had ***none*** with regard to the "Free World Dialup" service because internet transmissions lack fixed geographic origination or termination points, which makes it impossible or impractical to separate internet services into interstate and intrastate components.[29] In particular, the Commission noted that the service could not "determine the actual physical location of an underlying IP address" and used 6-digit identification numbers rather than North American Numbering Plan (NANP) telephone numbers.[30]

The Commission affirmed that using NANP numbers to specify originating and terminating points on the PSTN is the essential distinction between "telecommunications" and other communications in the *AT&T Declaratory Ruling*, which held that AT&T's "PSTN-to-PSTN" VoIP service is a "telecommunications service."[31] The service at issue permitted users to initiate a long distance call in the traditional manner — by dialing 1+ the called number from an ordinary telephone using the PSTN. When the call reached AT&T's long distance network, AT&T converted it from its existing format into an Internet Protocol (IP) format and transported it over AT&T's internet backbone to the local exchange of the called party, where AT&T converted the call back from IP format to a format compatible for delivery to the local exchange carrier's PSTN switch.[32] The Commission concluded that AT&T's service (1) was "telecommunications" because "[e]nd-user

[27] *Pulver Order* at ¶¶ 20-21.

[28] *Id.* at ¶ 21.

[29] *See id.* at ¶¶ 21-22.

[30] *See id.* at ¶¶ 5, 22.

[31] Petition for Declaratory Ruling that AT&T's Phone-to-Phone IP Telephony Services are Exempt from Access Charges, WC Docket No. 02-361, Order, 19 FCC Rcd. 7457 at ¶ 1 (2004) (*AT&T Declaratory Ruling*).

[32] *See id.* at ¶ 11.

customers do not ... place and receive calls any differently than they do through AT&T's traditional circuit-switched long distance service," and (2) was a "telecommunications service" because it offered this basic capability to the public for a fee.[33] The Commission also noted that AT&T's phone-to-phone service was not an "information service" because it did not offer access to stored files or otherwise provide "enhanced functionality ***to end users*** due to the provider's use of IP technology."[34] Instead, "the decision to use its Internet backbone to route certain calls [was] made internally by AT&T."[35]

The Commission further clarified this fundamental distinction between traditional PSTN transmissions and internet transmissions in the *Vonage Order*, which preempted state regulation of an "IP-to-PSTN" (or "interconnected") VoIP service.[36] Vonage's service permitted its users to originate and terminate real-time voice communications over the Internet to or from anyone with a NANP telephone number, including users reachable only through the PSTN.[37] Although Vonage's service used NANP numbers, they served as a proxy for users' IP addresses and were "not necessarily tied to the user's physical location for either assignment or use, in contrast to most wireline circuit-switched calls."[38] Vonage sought to avoid state regulation by having the Commission declare, among other things, that its IP-to-PSTN service was an "information service." The Commission preempted

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[33] *See id.* at ¶ 12.

[34] *See id.* ¶¶ 1, 12.

[35] *Id.* at ¶ 12.

[36] Vonage Holdings Corp., Memorandum Opinion and Order, FCC 04-267, 19 FCC Rcd. 22404 at ¶ 1 (2004) (*Vonage Order*), *aff'd, Minnesota Pub. Utilities Comm'n. v. FCC*, 483 F.3d 570 (8th Cir. 2007). The Commission has subsequently defined "VoIP-PSTN traffic" as "traffic exchanged over PSTN facilities that originates and/or terminates in IP format"). Connect Am. Fund A Nat'l Broadband Plan for Our Future Establishing Just & Reasonable Rates for Local Exch. Carriers High-Cost Universal Serv. Support Developing an Unified Intercarrier Comp. Regime Fed.-State Joint Bd. on Universal Serv. Lifeline & Link-Up Universal Serv. Reform — Mobility Fund, 26 F.C.C. Rcd. 17663 at ¶ 940 (2011), *aff'd sub nom., In re FCC 11-161*, 753 F.3d 1015, 1155 (10th Cir. 2014).

[37] *See Vonage Order* at ¶ 8.

[38] *See id.* at ¶ 9.

state regulation without addressing the classification question, however, because it was ***impossible*** to separate Vonage's service service into "interstate and intrastate communications."[39]

Consistent with its analysis of the IP-to-IP VoIP service in the *Pulver Order* and other orders addressing internet transmissions, the Commission concluded that Vonage had "no means of directly or indirectly identifying the geographic location of its subscribers" or the termination points of their communications due to the "Internet's inherently global and open architecture."[40] The Commission noted that the "impossibility" of locating the terminating points of Vonage's communications "results from the inherent capability of IP-based services to enable subscribers to utilize multiple service features that access different websites or IP addresses during the same communication session and to perform different types of communications simultaneously...."[41] The Commission also noted that, in contrast to traditional commercial mobile radio service or CRMS calls (a form of "mobile service"),[42] potential proxies for the end points of Vonage's service were "very poor fits" for end-to-end analysis.[43]According to the Commission, "it is the total lack of dependence on any geographically defined location [or reasonable proxies] that ***most distinguishes*** [internet transmissions] from other services whose federal or state jurisdiction is determined based on the geographic end points of the communications."[44] In its decision affirming the *Vonage Order*, the 8th Circuit Court of Appeals described this difference at "significant."[45]

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[39] *Id.* at ¶ 1.

[40] *Id.* at ¶¶ 23-25.

[41] *Vonage Order* at ¶ 25.

[42] *See Nuvio Corp. v. FCC*, 473 F.3d 302, 303 (D.C. Cir. 2006) (noting that routers designed to direct 911 calls could not recognized the non-native area codes used by interconnected VoIP service providers, "and unlike and unlike traditional and wireless telephone service, there are no means yet available to easily determine the location of a caller using interconnected VoIP service").

[43] *Vonage Order* at ¶ 29.

[44] *Id.* at ¶ 25.

[45] *See Minnesota Pub. Utilities Comm'n. v. FCC*, 483 F.3d 570, 574 (8th Cir. 2007).

Commission decisions in universal service and intercarrier compensation proceedings involving VoIP have similarly relied on the significant ***factual*** distinction between the ability of users to specify points on the PSTN and the inability of users to do so with respect to broadband internet transmissions. In its initial comments in this proceeding, Tech Knowledge noted that the "dial-up internet's reliance on an ordinary telephone call for access to the internet is why all 'information services' in the dial-up era were delivered 'via telecommunications.'"[46] These comments also noted that, when addressing the Commission's preemption of state reciprocal compensation obligations for ISPs, the D.C. Circuit Court of Appeals distinguished between the "telecommunications" portion of dial-up internet access — the initial telephone call to the ISP's service — and the mere "communications" portion — which begins once the ISP receives the dial-up call and "'originate[s] further communications to deliver and retrieve information to and from distant websites.'"[47] The D.C. Circuit Court thus recognized that, although internet transmissions are "communications," they are ***not*** "telecommunications" as defined by the Communications Act.

In *In re FCC 11-161*,[48] a decision upholding the Commission's *First CAF Order*,[49] the 10th Circuit Court of Appeals affirmed the D.C. Circuit's view that dial-up internet access calls "terminate" when they reach the ISP's server.[50] The issue was raised in the universal service context by Transcom, an "enhanced service provider" (ESP) who provides transit services in the middle of

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[46] *Tech Knowledge Comments* at 22.

[47] *See Tech Knowledge Comments* at 25 (quoting *Bell Atl. Tel. Cos. v. FCC*, 206 F.3d 1, 6 (D.C. Cir. 2000)). *See also AT&T Corp. v. City of Portland*, 216 F.3d 871, 877 (9th Cir. 2000) (noting that the dial-up portion of dial-up internet access is a classic "telecommunications" service that is separate from the ISP's information service), holding limited by *Brand X*; *Nat'l Cable & Telecomms. Ass'n v. Gulf Power Co.*, 534 U.S. 327, 352 n. 4, 122 S.Ct. 782, 151 L.Ed.2d 794 (2002) (Thomas, J., concurring in part and dissenting in part) (describing high-speed internet access as requiring "two separate steps," transmission from the consumer to the ISP's point of presence and the connection between the ISP's point of presence and the internet, and recognizing that the Commission had not yet classified the first, transmission step in the cable context).

[48] 753 F.3d 1015 (10th Cir. 2014).

[49] Connect Am. Fund, FCC 11-161, 26 FCC Rcd. 17663 (2011) (*First CAF Order*).

[50] *See In re FCC 11-161*, 753 F.3d 1015, 1153 (10th Cir. 2014).

PSTN calls. Transcom argued that *all* calls involving an ESP terminate and originate with the ESP.[51] "Under [Transcom's] view, even when the enhanced service provider is in the middle of a communication, the call terminates; when the call leaves the enhanced service provider, a new call has begun."[52] The 10th Circuit rejected Transcom's view as a misreading of the D.C. Circuit's reciprocal compensation opinions.[53] The 10th Circuit noted that the Commission's regulations defined "termination" as "'the switching of traffic ... at the terminating carrier's end office switch (or equivalent facility) and delivery of that traffic from that switch to the called party's premises.'"[54] The court concluded that, while dial-up calls clearly meet this definition, Transcom did not: "Because Transcom is not the called party, calls do not terminate with it."[55]

In addition to affirming the D.C. Circuit's approach to dial-up internet access calls, the 10th Circuit's decision is also consistent with the Commission's *AT&T Declaratory Ruling*, in which the Commission concluded that the use of IP-in-the-middle did not convert an otherwise ordinary PSTN-to-PSTN call from "telecommunications" (and thus, "telecommunications service") into an "information service."[56] Any such "intermediate provider," defined in the *First CAF Order* as "any entity that carries or processes traffic that traverses or will traverse the PSTN at any point insofar as that entity neither originates nor terminates that traffic,"[57] falls with the "telecommunications management exception" because the use of IP-in-the-middle does not change the fundamental nature of the basic telephone service.[58] The Commission decided to specifically define such intermediate

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[51] *See id.* at 1151-53.

[52] *Id.* at 1153.

[53] See *Minnesota Pub. Utilities Comm'n*, 483 F.3d 570; and *WorldCom, Inc. v. FCC*, 288 F.3d 429 (D.C. Cir. 2002). *See also In re Core Commc'ns, Inc.*, 455 F.3d 267 (D.C. Cir. 2006) (upholding the Commission's third attempt at justifying its preemption of reciprocal compensation obligations for dial-up ISPs).

[54] *In re FCC 11-161*, 753 F.3d at 1153 (quoting *Atl. Bell Tel. Cos.*, 206 F.3d at 5).

[55] *See id.*

[56] *See AT&T Declaratory Ruling* at ¶ 12.

[57] *See First CAF Order* at ¶ 720, codified in 47 C.F.R. § 64.1600.

[58] *See Tech Knowledge Comments* at 16-18.

providers in order to facilitate the requirement that all telecommunications providers and entities providing interconnected VoIP service must pass the calling party's telephone number (or, if different, the financially responsible party's number), ***unaltered***, to subsequent carriers in the call path so that terminating carriers can properly bill calls. In other words, the Commission updated its rules to ensure that the PSTN could continue to specify the "points" of telephone calls despite technological changes to the network.[59]

Interconnection with the PSTN was also the basis for a series of Commission decisions imposing various public interest obligations on interconnected VoIP service providers, including E911 obligations,[60] universal service contribution obligations,[61] Customer Proprietary Network Information (CPNI) obligations,[62] and disability access requirements.[63] For example, in the *VoIP 911 Order*, the Commission concluded it was reasonable to require interconnected VoIP service providers to route 911 calls to the appropriate destination, irrespective of the service's classification, because interconnected VoIP services permit their users to do everything (or nearly everything) they could do using an analog telephone.[64] Though the Commission relied on its Title I ancillary authority and its plenary authority over NANP numbering as legal bases for its decision,[65] its decision was also con-

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[59] *See First CAF Order* at ¶ 720.

[60] IP-Enabled Services; E911 Requirements for IP-Enabled Service Providers, First Report and Order and Notice of Proposed Rulemaking, 20 FCC Rcd. 10245 (2005) (*VoIP 911 Order*), *aff'd sub nom, Nuvio Corp. v. FCC*, 473 F.3d 302 (D.C. Cir. 2006).

[61] Universal Service Contribution Methodology, Report and Order and Notice of Proposed Rulemaking, 21 FCC Rcd. 7518 (2006) (*VoIP Contribution Order*), *aff'd sub nom., in relevant part, Vonage Holdings Corp. v. FCC*, 489 F.3d 1232 (D.C. Cir. 2007).

[62] Implementation of the Telecommunications Act of 1996: Telecommunications Carriers Use of Customer Proprietary Network Info. & Other Customer Info. Ip-Enabled Servs., FCC 07-22, 22 FCC Rcd. 6927 (2007) (*VoIP CPNI Order*), *aff'd sub nom.,* Nat'l Cable & Telecommunications Ass'n v. FCC, 555 F.3d 996 (D.C. Cir. 2009).

[63] IP-Enabled Servs. Implementation of Sections 255 & 251(a)(2) of the Commc'ns Act of 1934, As Enacted by the Telecommunications Act of 1996: Access to Telecommunications Serv., Telecommunications Equip. & Customer Premises Equip. by Persons with Disabilities Telecommunications Relay Servs. & Speech-to-Speech Servs. for Individuals with Hearing & Speech Disabilities the Use of N11 Codes & Other, 22 FCC Rcd. 11275 (2007) (*VoIP TRS Order*).

[64] *See VoIP 911 Order* at ¶ 23.

[65] *See id.* at ¶¶ 26-35.

sistent with Commission precedent regarding the "adjunct-to-basic" service category (now codified in the "telecommunications management exception"), which ***treats*** a service as "telecommunications" if it "facilitate[s] use of the basic network without changing the nature of basic ***telephone*** service."[66] It appears the Commission employed this approach — treating interconnected VoIP as an "adjunct-to-basic" service that falls within the "telecommunications management exception" — in the *VoIP Contribution Order*,[67] which determined that interconnected VoIP service transmissions are "telecommunications" ***because*** they "permit[] users to receive calls from and terminate calls to the PSTN."[68]

Packet switching

As discussed in more detail below, the Commission's treatment of various packet-switched services further clarifies that interconnection with the PSTN — i.e., the ability to originate and terminate calls to plain old telephones — is ***required*** for transmissions to be "telecommunications." There is no need for the Commission to dispute the assertion that "[i]t would be absurd to suggest that a communications network is not providing telecommunications simply because it is packet switched as opposed to circuit-switched,"[69] because the Commission's analytical framework has never suggested such a thing. The definitive question has always been whether the packet switched portion of the network is interconnected with the PSTN and thus falls within the "telecommunications

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[66] N. Am. Telecommunications Ass'n Petition for Declaratory Ruling Under Section 64.702 of the Commission's Rules Regarding the Integration of Centrex, Enhanced Servs., & Customer Premises Equip., 101 F.C.C.2d 349 at ¶ 28 (1985) (*Centrex Order*) (emphasis added).

[67] *See* Universal Service Contribution Methodology, Report and Order and Notice of Proposed Rulemaking, 21 FCC Rcd. 7518 at ¶¶ 38-49 (2006) (*VoIP Contribution Order*), *aff'd sub nom., in relevant part, Vonage Holdings Corp. v. FCC*, 489 F.3d 1232 (D.C. Cir. 2007).

[68] *2006 Interim Contribution Methodology Order* at ¶ 41.

[69] *Public Knowledge Comments* at p. 17.

management exception," i.e., whether packet switching is used to "facilitate use of the basic network without changing the nature of basic telephone service."[70]

The classic example of a packet switched service that was classified as an "adjunct-to-basic" service (and thus, now falls within the "telecommunications management exception") are Signaling System 7 (SS7) networks,[71] which are packet-switched networks that are physically separate from, but interconnected with, the PSTN.[72] SS7 networks are used to provide services for the PSTN, including access to remote databases (i.e. to facilitate "1-800" calls), that fall within the literal definitions of both "enhanced" and "information service," but have always been treated by the Commission as "adjunct-to-basic" (or exempt "telecommunications management" services), because SS7 networks merely facilitate use of the PSTN without changing its fundamental nature.[73]

Though the Commission has not formally classified VoIP services, its conclusion in the *AT&T Declaratory Ruling* that PSTN-to-PSTN calls that use Internet Protocol in the middle are a "telecommunications" service is fully consistent with the Commission's classic treatment of packet-switched networks that are used to facilitate communications on the PSTN.

Twenty-First Century Communications and Video Accessibility Act of 2010

Congress acquiesced in the Commission's approach to regulating VoIP services when Congress passed the Twenty-First Century Communications and Video Accessibility Act of 2010 (CVAA),[74] which, among other things, added a statutory definition for "advanced ***communications***

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[70] N. Am. Telecommunications Ass'n Petition for Declaratory Ruling Under Section 64.702 of the Commission's Rules Regarding the Integration of Centrex, Enhanced Servs., & Customer Premises Equip., 101 F.C.C.2d 349 at ¶ 28 (1985) (*Centrex Order*).

[71] *See, e.g., United States v. W. Elec. Co.*, 969 F.2d 1231, 1234 (D.C. Cir. 1992) (describing SS7 networks).

[72] *See* Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, 11 FCC Rcd. 14171 at ¶¶ 108, 456-59 (1996).

[73] *See Centrex Order* at ¶¶ 24-27.

[74] *See* Twenty-First Century Communications and Video Accessibility Act of 2010, Pub. L. No. 111-260, § 103(b), 124 Stat. 2751, 2755 (2010). *See also* Amendment of Twenty-First Century Communications and Video Accessibility Act of 2010, Pub. L. 111-265, 124 Stat. 2795 (2010) (making technical corrections to the CVAA).

services"[75] that (1) codified the Commission's pre-existing definition of "interconnected VoIP service"[76] and (2) added a new definition for "non-interconnected VoIP service."[77] The CVAA provides that

First, the fact that Congress chose to describe VoIP services as "communications" services rather than "telecommunications" services signals Congress's acquiescence in (1) the Commission's traditional exclusion of IP transmissions from the Act's definition of "telecommunications" and (2) the Commission's approach to determining whether a service falls within the "telecommunications management exception." For example, the CVAA provides that manufacturers of equipment used for "advanced communications services" and providers of such services must ensure their equipment and services are accessible to and usable by individuals with disabilities.[78] These provisions essentially codified the Commission's 1999 decision to apply disabilities access requirements to information services (voicemail and interactive menu services) and related equipment that are "essential to the ability of persons to effectively use telecommunications,"[79] a reason that is substantially similar to the Commission's standard for determining whether a service is "adjunct-to-basic" and therefore should be treated as "telecommunications service" under the "telecommunications management exception." In reaching this conclusion, the Commission noted it was "not breaking new ground, but [was] simply continuing [its] longstanding practice of asserting jurisdiction over voicemail and interactive menus."[80] The CVAA thus acquiesced in the Commission's previous determination that

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[75] 47 U.S.C. § 153(1) (emphasis added).

[76] *See* 47 U.S.C. § 153(25). The Commission first defined this service in the *VoIP 911 Order* as a service that (1) enables real-time, two-way voice communications; (2) requires a broadband connection from the user's location; (3) requires IP-compatible customer premises equipment (CPE); and (4) permits users generally to receive calls that originate on the PSTN and to terminate calls to the PSTN. *See VoIP 911 Order* at ¶ 24.

[77] *See* 47 U.S.C. § 153(36).

[78] *See* 47 U.S.C. § 617(a)-(b).

[79] *See* Implementation of Sections 255 & 251(a)(2) of the Commc'ns Act of 1934, As Enacted by the Telecommunications Act of 1996, 16 FCC Rcd. 6417 at ¶ 97 (1999).

[80] *Id.*

these "information services" (voicemail and interactive menu services) can nevertheless be treated as "telecommunications services" for the same reason that "adjunct-to-basic" services were so treated: because they facilitate the use of plain old telephone service without fundamentally changing its nature.

Second, Congress's addition of a ***new*** definition for "non-interconnected VoIP" indicates its agreement with the Commission's longstanding exclusion from Title II regulation of services that cannot originate and terminate calls on the PSTN, because non-interconnected transmissions do not meet the literal definition of "telecommunications" and the service itself does not meet the definition of "adjunct-to-basic" services that could nevertheless be deemed subject to regulation under the "telecommunications management exception". If the *Title II Order* was correct in its interpretations of "telecommunications" (that it encompasses internet transmissions) and the "public switched network" (that it encompasses internet transmissions irrespective of the ability to originate or terminate a call from or to a plain old telephone), Congress would not have needed to give the Commission new authority over non-interconnected VoIP service providers.[81] Given the *Title II Order's* conclusion that mobile broadband is interconnected with the public switched network ***because*** VoIP "gives [mobile broadband] subscribers the ability to communicate with all NANP endpoints as well as with all users of the Internet,"[82] the Commission would already have had all the authority it needed to impose any or all Title II obligations on non-interconnected VoIP service providers. This conclusion, which was upheld by the *USTA* court,[83] is enough in-and-of-itself for the Commission to treat non-interconnected VoIP service providers as common carriers subject to Title II regulation (due to their new-found and apparently contradictory "interconnection" with the PSTN).

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[81] According to the *Title II Order*, it was always "clear" that broadband internet transmissions are "telecommunications." irrespective of their interconnection with the public switched "telephone" network. *See Title II Order* at ¶ 361.

[82] *Title II Order* at ¶ 401.

[83] *See United States Telecom Ass'n v. FCC*, 825 F.3d 674 (D.C. Cir. 2016) (*USTA*).

The Communications Act's use of the term "points" in other definitional provisions

Other definitions in the Communications Act also indicate that Congress intended the term "points," as it appears in the definition of "telecommunications," to be interpreted in its traditional sense: as referring to the originating and terminating points of a transmission on the public switched ***telephone*** network. For example, the Act defines the terms:

- "wire communication" as "the transmission of writing, signs, signals, pictures, and sounds of all kinds by aid of wire, cable, or other like connection between the ***points*** of origin and reception of such transmission....";[84]
- "local access and transport area" or "LATA" as "a contiguous geographic area ... such that no exchange area includes ***points*** within more than 1 metropolitan statistical area, consolidated metropolitan statistical area, or State....";[85]
- "interLATA service" as "telecommunications between a ***point located*** in a local access and transport area and a ***point located*** outside such area;"[86] and
- "interstate communication" or "interstate transmission" as "communication or transmission (A) from any State, Territory, or possession of the United States (other than the Canal Zone), or the District of Columbia, to any other State, Territory, or possession of the United States (other than the Canal Zone), or the District of Columbia, (B) from or to the United States to or from the Canal Zone, insofar as such communication or transmission takes place within the United States, or (C) between ***points*** within the United States but through a foreign country; but shall not, with respect to the provisions of subchapter II of this chapter (other than section 223 of this title), include wire or radio communication between ***points*** in the same State, Territory, or possession of

[84] 47 U.S.C.A. § 153(59) (emphasis added).

[85] 47 U.S.C.A. § 153(31) (emphasis added).

[86] 47 U.S.C.A. § 153(26) (emphasis added).

the United States, or the District of Columbia, through any place outside thereof, if such communication is regulated by a State commission."[87]

The definition of "wire communication" clearly uses the term "points" to refer to the originating and terminating points of a transmission; and the definitions of "LATA," "interLATA service," and "interstate transmission" all use the term "points" in relation to specific locations or geographic areas, which is consistent with the Commission's traditional use of its "end-to-end" jurisdictional analysis and industry billing practices on the PSTN, which the Commission has also found ***inapplicable*** to internet transmissions that are ***not*** interconnected with the PSTN (in the sense used in these comments).

These provisions leave no gap-filling room for the *Title II Order's* conclusion that the term "points specified by the user" is ambiguous and, therefor, that "uncertainty concerning the geographic location of an endpoint of communication is irrelevant" for the purpose of applying the definition of "telecommunications."[88] It is a presumption of statutory construction that a "term appearing in several places in a statutory text is generally read the same way each time it appears,"[89] and its a standard canon of statutory construction that a provision is ambiguous only "when, ***despite a studied examination of the statutory context***, the natural reading of a provision remains elusive."[90] Given these statuary definitions' use of the term "points" to refer to identifiable (and thus, specifiable) locations of the originating and terminating points of a telephone call on the PSTN, and the absence of evidence that Congress intended the term "points" to mean something else in the definition of "telecommunications," the *Title II Order's* conclusion that the term is ambiguous when used in the definition of "telecommunications" cannot stand.

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[87] 47 U.S.C.A. § 153(28) (emphasis added).

[88] *Title II Order* at ¶ 361.

[89] *See Ratzlaf v. United States*, 510 U.S. 135, 143, 114 S. Ct. 655, 126 L. Ed. 2d 615 (1994).

[90] *Geisinger Cmty. Med. Ctr. v. Sec'y U.S. Dep't of Health & Human Servs.*, 794 F.3d 383, 394 (3d Cir. 2015) (emphasis added).

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In summary, the Commission's traditional classification of ISPs as "information service" providers "rested ... on an acknowledgment of the real [factual, technical] differences between" the PSTN and the internet, and the *Title II Order* failed to offer a reasonable explanation as to "why those have now dropped out of the picture."[91] If Congress had intended that the term "telecommunications" be read broadly so as to extend beyond the public switched ***telephone*** network, why did Congress use the term "points," a term that had long been used by the Commission and industry for jurisdictional and billing purposes, respectively, with respect to POTS transmissions that originate and terminate on the PSTN and ***not*** with respect to internet transmissions? The term "points" and a users' ability to "specify" them had an unambiguous, technical meaning well before Congress adopted the 1996 Act, and there is no reason to believe Congress intended these terms to have a different meaning as used in the definition of "telecommunications." No matter how important the policy issues raised in the *Title II Order* and in this proceeding might (or might not) be or how circumstances might (or might not) have changed, the Commission has no power to change the unambiguous meaning of its enabling statute. Only Congress has that power.

"Telecommunications" is not equivalent to "facilities"

There is nothing in the definition of "telecommunications" or the statutory context described above that indicates the term was intended to refer to "facilities." In *AT&T v. Portland*, the 9th Circuit Court of Appeals nevertheless reached that conclusion when interpreting the term "telecommunications" in the context of the transfer of a local cable franchise.[92] The appellant challenged the franchise authority's decision to condition transfer of the cable franchise on the the cable

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[91] *See Bell Atl. Tel. Companies v. FCC*, 206 F.3d 1, 8 (D.C. Cir. 2000) ("Although, to be sure, the Commission used policy arguments to justify the [ESP/ISP access charge] "exemption," it also rested it on an acknowledgment of the real differences between long-distance calls and calls to information service providers. It is obscure why those have now dropped out of the picture.").

[92] *See AT&T Corp. v. City of Portland*, 216 F.3d 871, 873 (9th Cir. 2000).

operator's grant of unrestricted access to its cable broadband transmission facilities for other ISPs ("open access").[93] Rather than refer the matter to the Commission under the doctrine of primary jurisdiction,[94] the 9th Circuit interpreted the relevant statutory terms without the benefit of the Commission's insight (apparently because the Commission had previously declined to address "open access" for cable operators).[95]

The court noted, correctly, that dial-up internet access "consists of two separate services" — (1) the "telephone service linking the user and the ISP," which the court recognized as "classic 'telecommunications,'" and (2) access to the internet provided by the ISP at its point of presence.[96] The court also noted, correctly, that the Commission "considers the [dial-up ISP] as providing 'information services' under the Act that use 'telecommunications.'"[97] The court did not consider the possibility that the term "via telecommunications" in the definition of "information services" was intended merely to refer to the fact that dial-up ISPs require their subscribers to make ordinary telephone calls—classic "telecommunications"—in order to use ISP services. Instead, the court made a a logical leap: that the term "via telecommunications" in the definition of "information services" means that the term "telecommunications" refers to facilities (or "pipes") rather than a type of "transmission."[98] Citing the Commission's analysis in the *Steven's Report*, the court concluded that all of the facilities used by an ISP, including "internet backbone" lines, are *in-and-of-themselves* "telecommunications." On the basis of this misstep, the court concluded that cable broadband ser-

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[93] *See id.* at 873.

[94] *See Reiter v. Cooper*, 507 U.S. 258, 268–69, 113 S. Ct. 1213, 122 L. Ed. 2d 604 (U.S. 1993).

[95] *See AT&T Corp. v. City of Portland*, 216 F.3d at 876 ("We note at the outset that the FCC has declined, both in its regulatory capacity and as amicus curiae, to address the issue before us.").

[96] *See id.* at 877.

[97] *See id.*

[98] *See id.* at 877-78.

vice "consists of two elements: a 'pipeline' (cable broadband instead of telephone lines), and the Internet service transmitted through that pipeline."[99]

The 9th Circuit's conclusion that "telecommunications" is equivalent to a cable operator's "pipeline" itself was inconsistent with (1) the plain language of the term "telecommunications," which defines a particular type of "transmission" without reference to "facilities" or "pipelines;"[100] and (2) the fact that the Act defines communications "services" in terms of transmission types, not types of facilities. "The Communications Act recognizes that some facilities can be used to provide more than one type of service," and it "contemplates that multi-purpose facilities will receive different regulatory classification and treatment depending on the service they are providing at a given time,"[101] which is typically determined by reference to its transmission type.[102] If Congress had intended that the term "telecommunications" refer to any transmission type other than a "cable transmission," it could easily have said so. Indeed, Congress specifically referred to "telecommunications facilities" in Section 541(b)(3)(D) of the Act, which generally prohibits local franchising authorities from requiring cable operators to provide such facilities.[103] Whether a transmission can be classified as "telecommunications" thus depends on whether the transmission type meets all of the elements of 47 U.S.C. § 153(50) — elements the *Portland* court did not consider.

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[99] *See id.* at 878.

[100] *See Pulver Order* at ¶ 9 ("Under the statute, the heart of 'telecommunications' is transmission.").

[101] *MediaOne Grp., Inc. v. Cty. of Henrico, Virginia*, 257 F.3d 356, 364 (4th Cir. 2001).

[102] See, e.g., Inquiry Concerning High-Speed Access to Internet over Cable & Other Facilities, 17 FCC Rcd. 4798, 4821 (2002) (*Cable Modem Order*) (noting that none of the relevant "statutory definitions rests on the particular types of facilities used").

[103] *See* 47 U.S.C. § 541(b)(3)(D). Cf. MediaOne Grp., Inc. v. Cty. of Henrico, Virginia, 257 F.3d 356, 363-65 (4th Cir. 2001) (distinguishing among "telecommunications," "telecommunications facilities," and "telecommunications service"). *See also In re FCC 11-161*, 753 F.3d 1015, 1046–47 (10th Cir. 2014) (noting that the Commission's use of the terms "facilities" and "service" in the second sentence of § 254(e) "'ensures that the term[s] ['facilities' and services'] carr[y] meaning, as each word in a statute should,'" quoting *Ransom v. FIA Card Servs., N.A.*, 562 U.S. 61, 131 S.Ct. 716, 724, 178 L.Ed.2d 603 (2011)).

In its *Brand X* decision, the 9th Circuit nevertheless held that the court and the Commission were bound by *Portland's* interpretation of "telecommunications" as a matter of *stare decisis*.[104] Presumably based on the weakness of *Portland's* analysis in this respect, in a concurring opinion to the 9th Circuit's *Brand X* decision, Judge Sidney R. Thomas offered additional explanation for *Portland's* interpretation.[105] Notably, Judge Thomas's explanation did not even mention the requirement that "telecommunications" transmissions be among or between "points specified by the user."[106] The concurrence appears to have considered it sufficient for purposes of the statutory definition of "telecommunications" that cable broadband's "capacity to send and receive email and download pre-existing content from websites ... involve, *at least in part*, the transmission of 'information of the user's choosing' without any change in form or content by the cable company."[107] It's axiomatic, however, that facts meeting only "part" of *some* elements of a statutory definition are insufficient to establish precedent. Rather than bolster *Portland*, Judge Thomas's concurring opinion emphasized that *Portland's* interpretation of "telecommunications" lacked a sufficient factual foundation and thus should not be given *stare decisis* effect.

The Supreme Court confirmed as much in its *Brand X* decision, in which the Court concluded that the 9th Circuit's *Portland* decision held "only that the *best* reading of § 153(46) was that cable modem service was a 'telecommunications service,' not that it was the *only permissible* reading of the statute."[108] The Court began its analysis by noting that, in *Portland*, the 9th Circuit was "not reviewing an administrative proceeding and the Commission was not a party to the case," and thus,

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[104] *See Brand X Internet Servs. v. FCC*, 345 F.3d 1120, 1132 (9th Cir. 2003), *rev'd and remanded sub nom. Nat'l Cable & Telecommunications Ass'n v. Brand X Internet Servs.*, 545 U.S. 967, 125 S. Ct. 2688, 162 L. Ed. 2d 820 (2005).

[105] *See Brand X*, 345 F.3d at 1134–40 (J. Thomas, concurring).

[106] *See id.* at 1136.

[107] *See id.*

[108] *See Nat'l Cable & Telecommunications Ass'n v. Brand X Internet Servs.*, 545 U.S. 967, 979–80, 125 S. Ct. 2688, 162 L. Ed. 2d 820 (2005) (emphasis in original).

did not have the benefit of the Commission's full expertise before deciding the case.[109] The Court then held that, "[b]efore a judicial construction of a statute, whether contained in a precedent or not, may trump an agency's, the court must hold that the statute unambiguously requires the court's construction."[110] The Court concluded that the 9th Circuit had not done so, because "[n]othing in *Portland* [expressly] held that the Communications Act unambiguously required treating cable Internet providers as telecommunications carriers," and the 9th Circuit had not invoked any "rule of construction (such as the rule of lenity) requiring it to conclude that the statute was unambiguous to reach its judgment."[111] For the same reason, *Portland's* interpretation of "telecommunications" is not binding on the Commission.

The *Brand X* and *USTA* decisions do not bind the Commission's interpretation of "telecommunications"

It is also for this same reason that the Supreme Court's decision in *Brand X* and the D.C. Circuit Court of Appeal's decision in *USTA*[112] do not bind the Commission's interpretation of "telecommunications" in this proceeding.

In *Brand X*, the Supreme Court did not hold that cable broadband uses "telecommunications" or that all "information services" uses "telecommunications," let alone that either does so "unambiguously." The Court merely assumed without deciding that cable broadband uses "telecommunications" because the parties had conceded the point.[113] The Court's actual holding was limited to the meaning of the word "offer" in the definition of "telecommunications service," because the entire case had proceeded on that issue alone. Indeed, in the case upholding the Commission's *VoIP Contribution Order*, the Computer & Communications Industry Association argued that "'[u]nder

[109] *See Brand X*, 545 U.S. at 979-80.

[110] *See Brand X*, 545 U.S. at 985.

[111] *See Brand X*, 545 U.S. at 984–85.

[112] 825 F.3d 674 (D.C. Cir. 2016).

[113] *See Brand X*, 545 U.S. at 988.

Brand X, the Commission is not permitted to isolate the 'transmission element' of VoIP and consider that component in isolation for purposes of Title II classification.'"[114] The court rejected this argument because, in *Brand X*, "the Court merely held that the meaning of the word 'offering' in the statute's definition of 'telecommunications service' was ambiguous and that the Commission's narrow interpretation was reasonable. The Court had no occasion to consider the meaning of [other phrases in the Act], much less to determine that [other] phrase[s] unambiguously demand[] the same construction the Commission applies to an 'offering of telecommunications.'"[115]

To the extent the concurring judges in the *USTA En Banc* decision argued that "*Brand X* unambiguously recognizes the agency's statutorily delegated authority to decide" whether "broadband ISPs are telecommunications providers," the judges were flatly wrong.[116] *Brand X* recognized that the agency has such authority ***if and only if*** broadband transmissions are "telecommunications," a condition that *Brand X* expressly did ***not*** decide, unambiguously or otherwise. The *Brand X* Court's consideration of consumer's perception of the offering is simply irrelevant to whether a particular transmission meets the technical requirements of the statutory definition of "telecommunications." To the extent *Brand X* said anything relevant to interpreting the statutory term "telecommunications," the Court's statement supports the position that broadband internet transmissions are not "telecommunications":

> In particular, the Commission defined 'basic service' as 'a pure transmission capability over a communications path that is virtually transparent in terms of its interaction with customer supplied information.' By 'pure' or 'transparent' transmission, the Commission meant a communications path that enabled the consumer to transmit an ordinary-language message to another point, with no computer processing or storage of the information, other than the processing or storage needed to convert the message into electronic form and then back into ordinary language for

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[114] *Vonage Holdings Corp. v. Fed. Commc'ns Comm'n*, 489 F.3d 1232, 1241 (D.C. Cir. 2007) (quoting CCIA Br 29).

[115] *Id.*

[116] *See United States Telecom Ass'n v. Fed. Commc'ns Comm'n*, 855 F.3d 381, 387 (D.C. Cir. 2017) (*USTA En Banc*).

> purposes of transmitting it over the network—such as via a telephone or a facsimile.[117]

The Court's description of "basic service" as "an ordinary-language message to another point," such as "via a telephone," supports the conclusion that the term "telecommunications" was intended to refer to transmissions that use the NANP to specify the "points" of a transmission that originates and terminates on the PSTN (i.e., transmissions that are "interconnected with the PSTN").

The D.C. Circuit's opinion in *USTA* is likewise non-binding with respect to the Commission's interpretation of the term "telecommunications," because the court did not hold that the definition of "telecommunications" unambiguously requires that broadband internet transmissions are "telecommunications." Indeed, like the Court's entire analysis in *Brand X*, the *USTA* court's analysis of *Chevron* step-one did not address the meaning of the term "telecommunications" at all.[118] In its step-two analysis, the *USTA* court appeared to acknowledge that a transmission type must meet the definition of "telecommunications" for the "offering" of that transmission type to constitute a "telecommunications service," but noted that the appellant had limited its challenge to the Commission's interpretation of the term "offering" in the definition of "telecommunications service."[119] Thus, like the Court in *Brand X*, the *USTA* court had no occasion to consider the meaning of [other phrases in the Act], much less to determine that [other] phrase[s] unambiguously demand[] the same construction the Commission applies to an 'offering of telecommunications.'"[120]

Computer II's unbundling obligations were based on competition analysis, not transmission types

Another area of confusion regarding the 1996 Act's definitional trifecta relates to the *Computer Inquiries'* unbundling obligations. When the multipurpose facilities that are used for an in-

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[117] *See Nat'l Cable & Telecommunications Ass'n v. Brand X Internet Servs.*, 545 U.S. 967, 976, 125 S. Ct. 2688, 162 L. Ed. 2d 820 (2005) (*Brand X*) (internal citations omitted).

[118] *See USTA*, 825 F.3d at 701–04 (containing the entirety of the court's step one analysis under *Chevron*).

[119] *See id.* at 710-11.

[120] *Id.*

formation service are unbundled, the ***temporal component*** of the information service and any other services the facilities are capable of providing — i.e., the fact that "multi-purpose facilities will receive different regulatory classification and treatment depending on the service they are providing ***at a given time***"[121] — are ***separated*** from the underlying facility. In these circumstances, the Commission has historically treated the offering of the unbundled facility itself as subject to regulation as a "telecommunications service" even when, as a factual matter, no "transmission" of any kind is being offered by the carrier that is required to unbundle the facilities.

The Commission began requiring monopoly telephone companies to unbundle their facilities for both "basic" and "enhanced" uses in 1976.[122] Facilities-based wireline carriers were required to unbundle their facilities based on their status as monopolists, not on the Commission's analysis of broadband internet access transmission types;[123] and the "Commission established the *Computer II* regulations pursuant to its ancillary jurisdiction under Title I, and not because it determined that facilities-based wireline broadband Internet access service providers were subject to mandatory Title II common carrier regulation."[124] The Commission's *Computer II* unbundling of basic services was thus "separate and distinct from the obligation created in section [47 U.S.C. Section] 251(c)(3) of the Communications Act, requiring incumbent LECs to provide access to UNEs."[125]

Confusion on this point offers the best explanation for the 1998 *Advanced Services Order's* conclusion that xDSL is "telecommunications" without the Commission first applying the elements

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[121] *MediaOne Grp., Inc. v. Cty. of Henrico, Virginia*, 257 F.3d 356, 364 (4th Cir. 2001).

[122] See, e.g., Appropriate Framework for Broadband Access to the Internet over Wireline Facilities, Report and Order and Notice of Proposed Rulemaking, FCC 05-150, 20 FCC Rcd. 14853 at ¶¶ 23-25 (2005) (*Wireline Broadband Order*) (describing the Commission's *Computer II* unbundling requirements).

[123] *See Wireline Broadband Order* at ¶ 63.

[124] *Time Warner Telecom, Inc. v. FCC*, 507 F.3d 205, 223 (3d Cir. 2007).

[125] *Wireline Broadband Order* at ¶ 24 n.64.

of the term's definition to the way in which xDSL transmissions actually work.[126] The Commission apparently assumed that it had authority to force LECs to unbundle their xDSL equipment, irrespective of the definitions adopted in the 1996 Act, because the Commission had traditionally required Bell Operating Companies (BOCs) to unbundle their facilities without regard to particular transmission types.[127] This conclusion ignored the pro-competitive purposes of the 1996 Act and the technical terms of art that Congress included in the definition of "telecommunications," and was subsequently abandoned in the *Wireline Broadband Order* as inconsistent with the Commission's overall approach to broadband and information services generally.[128]

To be sure, the *Wireline Broadband Order* noted that "the offering of DSL transmission on a common carrier basis was [treated as] a telecommunications service."[129] Indeed, it does not seem unreasonable to treat the offering of unbundled facilities that ***could*** be used to provide multiple services, including "telecommunications service," as a "telecommunications service." Otherwise, such facilities could have escaped Title II regulation even if they were ultimately used to transmit "telecommunications" for a fee, and thus, to offer "telecommunications service."

But, as the Commission noted in the *Wireline Broadband Order*, classifying the offering of unbundled facilities as a "telecommunications service" does not mean that particular facilities must be unbundled in the first place.[130] Similarly, the possibility that the Commission could require that particular facilities be unbundled does not automatically convert all transmission types that are cur-

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[126] See Deployment of Wireline Servs. Offering Advanced Telecommunications Capability, 13 FCC Rcd. 24012 at ¶¶ 11-12, 35-37 (1998) (*Advanced Services Order*). The Commission has similarly treated xDSL offered on a "special access" basis as a "telecommunications service." *See* GTE Telephone Operating Cos., CC Docket No. 98-79, Memorandum Opinion and Order, 13 FCC Rcd. 22466 (1998) (determining that xDSL offered through a "special access" service was jurisdictionally interstate). *See also Sw. Bell Tel. Co. v. FCC*, 19 F.3d 1475, 1482 (D.C. Cir. 1994) (noting the Commission's "traditional common-carrier treatment" of special access services).

[127] *See id.* at ¶ 37.

[128] *See Wireline Broadband Order* at ¶ 12 n.32 (noting that the Commission had "not been entirely consistent" in its treatment of the relevant statutory terms).

[129] *See id.* at ¶ 106.

[130] *See id.*

rently occurring on those facilities or that could occur on those facilities into "telecommunications." The absence or presence of unbundling requirements is simply irrelevant to the question of whether a particular transmission type meets the statutorily required elements of the definition of "telecommunications." Otherwise, requiring facilities unbundling of a "cable system" would automatically convert one-way video transmissions over those facilities into "telecommunications," and thus, would convert "cable service" into "telecommunications service." There is no evidence that Congress intended such an absurd result.

This understanding of the difference between unbundling requirements and the definition of "telecommunications" was confirmed by the 3rd Circuit Court of Appeals in *Time Warner Telecom, Inc. v. FCC*,[131] which upheld the *Wireline Broadband Order*. The court noted that petitioners had attempted to "distinguish wireline broadband service from cable modem service on grounds that LECs offer their wireline transmission component on a 'stand-alone' basis to other ISPs."[132] Petitioners argued that, because LECs leased their transmission facilities to independent ISPs, LECs were offering a separate telecommunications service (and thus, were statutorily required to do so indefinitely). The court rejected his argument because the "fact that LECs have provided independent ISPs with stand-alone transmission capabilities is, as the FCC points out, a function of the very regulatory requirements that the [*Wireline Broadband Oder*] seeks to eliminate."[133] The court noted that the facilities used by cable modem providers could be offered on a stand-alone basis too and concluded that this mere possibility does not convert cable broadband service into a "telecommunications service."[134]

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[131] 507 F.3d 205, 218–19 (3d Cir. 2007).

[132] *Id.* at 218.

[133] *Id.*

[134] *See id.* at 218-19.

Title II proponents citation of the Commission's *Advanced Services Order* as relevant to the general issue of classification are thus misplaced.

Other statutory provisions indicate Congress intended to limit "telecommunications" to the PSTN

First, Congress's adoption of the Omnibus Consolidated and Emergency Supplemental Appropriations Act (1999) affirmed thrice-over the Commission's earlier precedent holding that "internet access service" is not a "telecommunications service."[135] Congress said this expressly in the Internet Tax Freedom Act,[136] in its establishment of the Advisory Commission on Electronic Commerce,[137] and in the Child Online Protection Act (codified in 47 U.S.C. § 231).[138] And Congress said the same thing *each* time: "The term 'Internet access service' ... does not include telecommunications services."[139] It was unreasonable for the *Title II Order* to contradict Congress's express statements based on an alleged ambiguity in the Act's definition of "telecommunications."

Second, as noted in its initial comments, the *Title II Order* made no attempt to reconcile its holding that "public IP addresses" are equivalent to NANP telephone numbers[140] with the facts that (1) Congress gave the Commission express authority over NANP numbers[141] while (2) acquiescing for decades in the National Telecommunications and Information Administration's (NTIA) assertion of control over the Domain Name System (DNS) for IP addresses.[142] Congress's acquiescence in the NTIA's transfer of control over the DNS to an international body does not square with the

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[135] *See* Omnibus Consolidated and Emergency Supplemental Appropriations Act of 1999, PL 105–277, 112 Stat 2681 (October 21, 1998).

[136] *Id.* at § 1101(e)(3)(D).

[137] *Id.* at § 1104(5).

[138] *Id.* at § 1403.

[139] 47 U.S.C. § 231(e)(4).

[140] *See Title II Order* at ¶ 391.

[141] *See* 47 U.S.C. § 251(e).

[142] *See* NTIA Announces Intent to Transition Key Internet Domain Name Functions, Press Release (March 14, 2014), available at https://www.ntia.doc.gov/press-release/2014/ntia-announces-intent-transition-key-internet-domain-name-functions.

Title II Order's finding that Congress intended that IP addresses be managed by the Commission under its authority over "telecommunications."

In addition, as noted above, there would have been no need for Congress to adopt a new definition for "advanced communications services" in the CVAA if the Commission already had the authority to treat non-interconnected VoIP as a "telecommunications service." Similarly, Congress would not have needed to amend 47 USC § 610(b) to treat non-interconnected voice CPE like traditional telephones because, according to the *Title II Order*, all internet CPE has been "interconnected" with the "public switched network" all along.[143]

The *Title II Order's* broad reading of "telecommunications" is inconsistent with the statutory scheme

The *Title II Order's* broad reading of "telecommunications" is also inconsistent with the overall structure and purpose of the Communications Act.

The Communications Act defines services in technical terms

For better or worse, there is no doubt that the Communications Act defines various types of communications services using technical terms that have the effect of separating those services into different regulatory "silos."[144] Even after its most comprehensive update in 1996, the Communications Act retained the traditional silos for regulating "telecommunications service" in Title II; "broadcasting,"[145] "television service,"[146] and "mobile service"[147] in Title III; and "cable service" in Title VI.[148] The Act thus divides communications into different "services" that generally correspond

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[143] *See Title II Order* at ¶ 48.

[144] *See, e.g.,* Kevin Werbach, *The Network Utility*, 60 DUKE L.J. 1761, 1767–68 (2011) (noting that "the FCC has labored for fifteen years under a statute that preserves old analog silos, such as telephone service and broadcasting, in a converged digital world").

[145] 47 U.S.C. § 153(7).

[146] 47 U.S.C. § 153(56).

[147] 47 U.S.C. § 153(33).

[148] 47 U.S.C. § 153(8).

to specific types of transmissions. For example, in broad functional terms, over-the-air "television service," "cable service," "direct broadcast satellite service,"[149] and "over-the-top" video distributors (e.g., Netflix) all "stream" video to consumers. Yet "television service," "cable service," and "direct broadcast satellite service" are all subject to different regulatory schemes while Netflix is not subject to regulation by the Commission at all. This seemingly arbitrary result might appear unreasonable, but it is the regulatory scheme established by Congress, and no amount of hand-wringing by net neutrality advocates can provide the Commission with authority to change it by reading unambiguous statutory definitions more broadly than Congress intended.

The Commission nevertheless did just that in the *Title II Order* by reading the definition of "telecommunications" so broadly that it now encompasses virtually all "two way" communications transmissions. The *Title II Order* rested its determination that internet transmissions are "telecommunications" on the fact that "[c]onsumers would be quite upset if their Internet communications did not make it to their intended recipients or the website addresses they entered into their browser would take them to unexpected web pages." Of course, the same can be said of ***any*** "mobile service" or "wire communication" transmission, including "cable service." For example, the Act's definition of "cable service" includes "subscriber interaction, if any, which is required for the selection or use of such video programming or other programming service,"[150] such as video on demand. A Comcast cable subscriber who sends a video-on-demand transmission "specifying" that they want to watch *Beauty and the Beast* would doubtless be upset if the cable operator responded by streaming *Bladerunner*. Under the Commission's reasoning in the *Title II Order*, the fact that the cable subscriber did not receive the movie they specified is enough to turn the subscriber's transmission into "telecommunications" and the "cable service" into a "telecommunications service" — a result that is

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[149] *See* 47 U.S.C. § 522(13) (defining a person who providers "direct broadcast satellite service" as a "multichannel video programming distributor"); 47 U.S.C. § 335 (directing the Commission to impose obligations on the "direct broadcast satellite service");

[150] 47 U.S.C. § 522(6)(B).

obviously absurd. If the bare fact that internet transmissions successfully facilitate "two way" communications were enough to define them as "telecommunications" under Title II, the Act's definitional schema would be rendered meaningless: ***All*** facilities-based, "two way" communications transmissions would be subject to common carriage.

The Communications Act's technical definitions are supported by sound policy considerations

It cannot be presumed that Congress regulates particular communications technologies differently for the sake of regulating particular communications technologies differently. Congress presumably imposes different regulations on different communications "silos" to address different public policy concerns. In the *Title II Order*, the Commission presumed the opposite — that Congress does not intend its statutory distinctions to serve the public interest.

The *Title II Order's* decision to regulate broadband internet access service as if it were plain old telephone service ignores the differing policy implications of the fundamental differences in capabilities offered by the internet in comparison to POTS. Unlike the PSTN, which was traditionally limited to offering the capability to have private,[151] real-time voice conversations (recorded voicemail has traditionally been classified as an "information service"), internet transmissions simultaneously offer functionality that is substitutable for the delivery of newspapers through the mail, over-the-air broadcast of radio and television programming, the transmission of cable video programming, and the distribution of books.[152] In the context of the mail, broadcast, cable, and books, mere dissemination — i.e., the "conduit" — is protected from common carrier regulation by the First Amendment, because they are public (or "mass media") communications. Mass media communications conduits are protected from common carriage obligations because "the government is capable

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[151] See *Katz v. United States*, 389 U.S. 347 (1967) (holding "that a person making a telephone call is 'entitled to assume that the words he utters into the mouthpiece will not be broadcast to the world.'").

[152] *See* Fred B. Campbell, Jr., *The First Amendment and the Internet: The Press Clause Protects the Internet Transmission of Mass Media Content from Common Carrier Regulation*, 94 NEB. L. REV. 559, 561 (2016).

of repressing speech 'by silencing certain voices at any of the various points in the speech process,' including dissemination."[153]

To use a highway analogy, assume cars are content and the highway system is the internet's "conduits." Further assume there is a First Amendment right to own cars, but that First Amendment protection does not apply to the highways. In these circumstances, the government could still decide what type of car a person can drive without regulating cars directly. If the government decided that red cars were offensive, it could prohibit the use of red cars on the highway. A person would be free to own a red car, but its practical use would be limited. If the First Amendment analysis in the *Title II Order* stands, the government could similarly regulate content on the internet through its control of broadband internet transmissions. Indeed, "[t]he 'press' merited disjunctive mention in the First Amendment because governments historically restricted speech through laws controlling the physical machinery of the printing press itself," and not through control over the editorial process directly.[154]

In the context of traditional mass media — printed newspapers, "television service," and "cable service" — the courts have consistently addressed this concern by applying the First Amendment's protections to dissemination.[155] Even more relevant here, Congress ***expressly*** exempted multichannel video programming ***distributors*** from common carrier regulation in section 542(c), which exempts "cable service" from "regulation as a common carrier or utility,"[156] and section 153(11), which exempts anyone engaged in "radio broadcasting" from being "deemed a common

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[153] *Id.* at 591 (quoting *Citizens United v. Fed. Election Comm'n*, 558 U.S. 310, 339 (2010)).

[154] *Id.* At 589.

[155] *See id.* at 591 and cases cited therein.

[156] 47 U.S.C. § 541(c) ("Any cable system shall not be subject to regulation as a common carrier or utility by reason of providing any cable service.").

carrier."[157] The Supreme Court addressed this limitation on the Commission's authority in *Midwest Video Corp*., in which the Court held that the "unequivocal" prohibition on common carrier treatment in section 153(11) (and by direct analogy, section 542(c)) "forecloses any discretion in the Commission to impose access requirements amounting to common-carrier obligations on broadcast [and cable] systems."[158] According to the Court, "forcing broadcasters to develop a 'nondiscriminatory system for controlling access . . . is precisely what Congress intended to avoid through § [153(11)] of the Act,'" and "that limitation is not one having peculiar applicability to television broadcasting."[159]

The *Title II Order's* decision to interpret "telecommunications" so broadly that it denies the same First Amendment protection to the distribution of mass media content over the internet is both (1) inconsistent with Congress's approach to dissemination in these analogous contexts and the Supreme Court's interpretation of Congress's intent, and (2) First Amendment precedent itself. Given that the *Title II Order* relied on *Chevron* deference in its interpretation of "telecommunications" — i.e., it concluded the term "points specified by the user" was ambiguous — a court would not need to decide the serious First Amendment discussed above in order to determine that the Commission's interpretation of "telecommunications" was unreasonable. The doctrine of constitutional avoidance states that, "[w]ithin the bounds of fair interpretation, statutes will be construed to defeat administrative orders that raise substantial constitutional questions."[160] Application of this doctrine indicates that the *Title II Order's* interpretation of the allegedly "ambiguous" term "points specified by the user" should have been rejected.

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[157] 47 U.S.C. § 153(11) ("[A] person engaged in radio broadcasting shall not, insofar as such person is so engaged, be deemed a common carrier."). "The term 'broadcasting' means the dissemination of radio communications intended to be received by the public, directly or by the intermediary of relay stations," 47 U.S.C. § 153(7), whether offered for free or on a subscription basis. *See National Assoc. of Theatre Owners v. FCC*, 420 F.2d 194, 202 (DC Cir. 1969), *cert. den.*, 397 US 922 (indicating that "subscription television is entirely consistent with" the definition of "radio broadcasting").

[158] *FCC v. Midwest Video Corp.*, 440 U.S. 689, 705 (1979)(*Midwest Video II*).

[159] *Id.* at 705, 707.

[160] *Bell Atl. Tel. Companies v. FCC*, 24 F.3d 1441, 1445 (D.C. Cir. 1994).

Rather than reject the Commission's over-broad interpretation of "telecommunications" by applying the doctrine of constitutional avoidance, however, the D.C. Circuit Court of Appeals upheld the Commission's interpretation in *USTA* by choosing to decide ***some*** constitutional issues while ***avoiding*** others — i.e., by applying a doctrine of selective judicial avoidance.[161] For example, the court's suggestion that an ISP can remove itself from the Commission's rules by "choos[ing] to exercise editorial discretion"[162] effectively ducked the question of whether the Commission's rules, on their face, ***prohibit an ISP from making that choice***. By ducking the question, the court enabled the Commission's subsequent decision to initiate "zero-rating" investigations of ISPs who had made the choice of exercising their editorial discretion,[163] and thus resulted in the chilling of First Amendment speech. Though the Commission's zero-rating investigations could have been challenged on an as-applied basis, the issue was foreseeable on the face of the rules and could have been avoided entirely if the doctrine of constitutional avoidance (rather than selective judicial avoidance) had been applied.

The Communications Act provides for state regulation of common carrier communications

The *Title II Order* is also inconsistent with Congress' intent that state regulators have a meaningful role in implementing Title II. As noted above, the 1996 Act expressly preserved state authority to regulate intrastate communications.[164] Yet in the *Title II Order*, the Commission announced its "firm intention to exercise [its] preemption authority to preclude states from imposing

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[161] 825 F.3d 674, 691 (D.C. Cir. 2016)

[162] *Id.* at 743.

[163] *See* Policy Review of Mobile Broadband Operators' Sponsored Data Offerings for Zero-Rated Content and Services, Wireless Telecommunications Bureau Report, available at http://transition.fcc.gov/Daily_Releases/Daily_Business/2017/db0111/DOC-342987A1.pdf, rescinded by Wireless Telecommunications Bureau Report: Policy Review of Mobile Broadband Operators' Sponsored Data Offerings for Zero Rated Content & Servs., 32 F.C.C. Rcd. 1093 (2017).

[164] 47 U.S.C. § 152(b).

obligations on broadband service that are inconsistent with the carefully tailored regulatory scheme" the Commission adopted.[165]

As the Supreme Court held in *Louisiana Pub. Serv. Comm'n v. FCC*, however, "Section 152(b) of the Act constitutes ... a congressional ***denial*** of power to the FCC to require state commissions to follow FCC ... practices for intrastate ratemaking purposes" that is both a substantive limitation on the Commission's power ***and*** "a rule of statutory construction."[166] The Commission thus acted contrary to the statutory scheme when it construed the definition of "telecommunications" — another substantive limit on the Commission's authority — broadly in order to assert its jurisdiction over all internet transmissions while at the same time denying the states any meaningful role in the internet's regulation. Given the impending shut down of the PSTN, the end result of the *Title II Order* is to cut the states out of the regulatory scheme entirely based on an alleged ambiguity in the definition of "telecommunications."

The Commission does not have that authority. First, because Section 152(b) of the Act is a rule of statutory construction, it precludes the Commission from construing an (allegedly) ambiguous statutory provision (in this case, the definition of "telecommunications") in a manner that restricts state regulatory authority. When the Commission must choose among competing interpretations of an ambiguous statutory provision, Section 152(b) prevents the Commission from choosing an interpretation that would substantially abrogate state authority over a reasonable interpretation that would have no adverse impact on state authority. Second, it is unreasonable to believe that, through an alleged ambiguity in the definition of "telecommunications," Congress intended that the Commission have authority to "fill the gap" by regulating broadband networks under Title II while simultaneously eliminating any meaningful exercise of state authority over such networks. It would

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[165] *Title II Order* at ¶ 433.

[166] 476 U.S. 355, 373, 374, 106 S. Ct. 1890, 90 L. Ed. 2d 369 (1986) (emphasis in original).

be absurd to conclude that Congress intended to hide a near total abrogation of state power over communications regulation in such a tiny mousehole.[167]

Broadband internet access service is either an "information service" or a "communication by radio or wire"

Public Knowledge argues that the term "via telecommunications" in the definition of "information service" is an insurmountable obstacle to classifying BIAS as an "information service."[168] Precedent, however, demonstrates that the term "via telecommunications" is not a bar to classifying BIAS as an "information service."

First, there is no indication that Congress intended to modify the Act's explicit definition of "telecommunications" by using the term "via telecommunications" in the definition of "information service." Second, the Commission concluded in the *Non-Accounting Safeguards Remand* that the term "via telecommunications" does not have a substantively material effect on the definition of "information service" itself.[169] Specifically, the Commission held that "there is no material difference between the scope of the terms 'telecommunications' and 'information services' under the MFJ and the Act."[170] The Commission noted that the MFJ used the term "***may be conveyed*** via telecommunications" and the Act uses the term "via telecommunications," but concluded that this minor difference in wording did not create a "substantive distinction."[171] The Commission has thus interpreted the term "via telecommunications" as a simple acknowledgment by Congress that, in the dial-up era, the use of "telecommunications" was typically required to access the internet and telephone compa-

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[167] *See Whitman v. Am. Trucking Associations*, 531 U.S. 457, 468, 121 S. Ct. 903, 909–10, 149 L. Ed. 2d 1 (2001) ("Congress ... does not alter the fundamental details of a regulatory scheme in vague terms or ancillary provisions—it does not, one might say, hide elephants in mouseholes.").

[168] *See Public Knowledge Comments* at pp. 27-32.

[169] Implementation of Non-Accounting Safeguards of Section 271 & 272 of Commc'ns Act of 1934, 16 FCC Rcd. 9751 (2001), Order on Remand, FCC 01-140, 16 FCC Rcd. 9751 at ¶ 29 n.83 (2001) (*Non-Accounting Safeguards Remand*).

[170] *Id.*

[171] *See id.* (emphasis in original).

nies were required to unbundle their facilities (the offering of which was ***treated*** as a "telecommunications service," as described above). "Like many statutes, the [Communications] Act contains some internal inconsistencies, vague language, and areas of uncertainty. It is not a perfect puzzle into which all the pieces fit."[172] Given the historical context, the Commission's interpretation of the term "via telecommunications" in the *Non-Accounting Safeguards Remand* is a reasonable one.

A reasonable interpretation of the term "information services" is all the law requires. As Tech Knowledge noted in its initial comments in this proceeding, the term "via telecommunications" in the definition of "information services" could be susceptible to more than one interpretation, at least when considered in the abstract.[173] At a minimum, this potential ambiguity left the Commission with *Chevron* discretion to reach its conclusion in the *Non-Accounting Safeguards Remand* that the term "via telecommunications" does not have a substantively material affect on the definition of "information service" and, by extension, does not modify the definition of "telecommunications."

But even if the alternative interpretation were definitive — that all "informations services" must include a "telecommunications" component — it would not produce the result that net neutrality advocates seek. As described in detail above and in Tech Knowledge's initial comments, BIAS does not have a "telecommunications" component as that term is unambiguously defined by the Act. Thus, no matter how the Commission interprets the term "via telecommunications" in the separate definition of "information service," BIAS would be subject only to the Commission's jurisdiction under Title I: (1) either as an "information service" or (2) as a service that has not been defined by the Act more specifically than the general categories of "communications by radio"[174] or "communi-

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[172] *See Louisiana Pub. Serv. Comm'n v. FCC*, 476 U.S. 355, 379, 106 S. Ct. 1890, 90 L. Ed. 2d 369 (1986).

[173] *See Tech Knowledge Comments* at pp. 39-40.

[174] 47 U.S.C. § 153(40).

cation by wire"[175] (just like "cable service" was at one time[176]). As a substantive matter, arguments that the Commission cannot classify BIAS as an "information service" based on the term "via telecommunications" are a red herring. In other words, however the term "via telecommunications" is interpreted, it would not transform broadband internet transmissions into "telecommunications" transmissions that are subject to common carrier regulation under Title II.

The *Title II Order's* gatekeeper analysis contradicted precedent on switching costs and competition

The *Title II Order's* conclusion that BIAS providers have the ability to act as as "gatekeepers" (a pseudo-synonym for "bottleneck" power[177]) "regardless of the competition in the local market for broadband Internet access" contradicted the D.C. Circuit's precedent addressing bottleneck power without discussing that precedent; and the D.C. Circuit's opinions in *Verizon v. FCC*[178] and *USTA*[179] contradicted the same D.C. Circuit precedent without attempting to distinguish or overrule it.

Switching costs

In the *Title II Order*, the Commission affirmed its previous conclusion in the *Open Internet Order*[180] that BIAS providers "have both the incentive and the ability to act as gatekeepers" irrespective of competition among ISPs and that, when a broadband provider acts as a gatekeeper, it actually

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[175] 47 U.S.C. § 153(59).

[176] *See, e.g., United States v. Sw. Cable Co.*, 392 U.S. 157, 88 S. Ct. 1994, 20 L. Ed. 2d 1001 (1968) (holding that the Commission had authority to regulate cable service under Title I).

[177] It is clear that, in *Verizon v. FCC*, the court treated the term "gatekeeper" as a synonym for "bottleneck" economic power. *See* 740 F.3d at 646 (describing "gatekeeper" power as "economic power" derived from an ISP's position as a "terminating monopolist," which is how "bottleneck" power has traditionally been described).

[178] 740 F.3d 623, 645-49 (D.C. Cir. 2014).

[179] 825 F.3d 674, 694 (D.C. Cir. 2016) (implicitly affirming the court's conclusions in *Verizon v. FCC*, 740 F.3d at 645-49).

[180] Preserving the Open Internet Broadband Indus. Practices, 25 FCC Rcd. 17905 (2010) (*Open Internet Order*).

chokes consumer demand for the very broadband product it can supply."[181] According to *Verizon v. FCC*, the Commission's *Open Internet Order* "convincingly detailed how broadband providers' [gatekeeper] position in the market gives them the ***economic power*** to restrict edge-provider traffic and charge for the services they furnish edge providers," because a subscribers' broadband provider "functions as a 'terminating monopolist.'"[182] The court noted that, "if end users could immediately respond to any given broadband provider's attempt to impose restrictions on edge providers by switching broadband providers, this gatekeeper power might well disappear,"[183] but "saw no basis for questioning the Commission's conclusion that end users are unlikely to react in this fashion."[184] In reaching this conclusion, the court parroted the Commission's non-empirical determinations that "'end users may not know whether charges or service levels their broadband provider is imposing on edge providers vary from those of alternative broadband providers, and even if they do have this information may find it costly to switch.'"[185]

The D.C. Circuit Court of Appeals reached contradictory conclusions on substantially the same facts in its cases addressing the cable horizontal ownership limit.[186] In *Comcast Corp. v. FCC*, the court concluded that the Commission had acted arbitrarily and capriciously by concluding that a "cable operator serving more than 30% of subscribers can exercise 'bottleneck monopoly power,'"[187] because the Commission had "failed to demonstrate that allowing a cable operator to serve more than 30% of all cable subscribers would threaten to reduce either competition or diversi-

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[181] *Title II Order* at ¶ 24.

[182] *Verizon v. FCC*, 740 F.3d at 646 (quoting *Open Internet Order* at ¶ 24) (emphasis added).

[183] *Verizon v. FCC*, 740 F.3d at 646.

[184] *Verizon v. FCC*, 740 F.3d at 646.

[185] *Verizon v. FCC*, 740 F.3d at 646-47 (quoting *Open Internet Order* at ¶ 27).

[186] *See Time Warner Entm't Co., LP v. FCC*, 240 F.3d 1126 (D.C. Cir. 2001) (*Time Warner II*); *Comcast*, 579 F.3d 1 (D.C. Cir. 2009).

[187] *Comcast*, 579 F.3d at 6 (quoting *Turner Broad. Sys. v. FCC (Turner I)*, 512 U.S. 622, 661, 114 S.Ct. 2445, 129 L.Ed. 2d 497 (1994)).

ty in programming."[188] The court began its analysis by noting that, whether a cable company can exercise gatekeeper power "depends, as we observed in *Time Warner II*, 'not only on its share of the market, but also on the elasticities of supply and demand, which in turn are determined by the availability of competition,'"[189] because "[i]f an MVPD refuses to offer new programming, customers with access to an alternative MVPD may switch."[190] The court noted that the Commission's evidence regarding switching — which consisted of describing transaction costs that are substantively similar to the evidence the agency offered in the *Title II Order* — was "non-empirical."[191] The court was willing to concede that "transaction costs undoubtedly do deter some cable customers from switching to satellite services," but based on record evidence that almost 50% of all [satellite] customers formerly subscribed to cable, the court concluded that "the Commission's observation that [transaction] cost[s] may deter some customers from switching to [competitors] is ***feeble*** indeed."[192]

Empirical evidence of switching among mobile BIAS providers is ***even stronger*** than the record evidence of switching the court considered to be definitive in the *Comcast* case. According to the Commission's most-recent annual mobile competition report, during the years from 2012 to 2015, on average, 23% to 24% of mobile subscribers switched providers ***every year***.[193] Similarly, a survey conducted by the Commission itself found that "[j]ust over one-third of Internet users changed their service provider in the prior three years," with 13% switching ***more than once*** during

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[188] *Comcast*, 579 F.3d at 8.

[189] *Comcast*, 579 F.3d at 6 (quoting *Time Warner II*, 240 F.3d at 1134).

[190] *Time Warner II*, 240 F.3d at 1134.

[191] *Comcast*, 579 F.3d at 7.

[192] *Comcast*, 579 F.3d at 7 (emphasis added).

[193] *See* Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, 31 FCC Rcd. 10534 at ¶ 18, Chart II.B.6 (WTB 2016) (*19th Mobile Competition Report*). It is reasonable to use churn as a proxy for swathing because the overall penetration rate of mobile services has risen in each of these years as well, which indicates that the majority of subscribers who canceled their connection with one provider resumed service with another. Based on the data in Chart II.B.6., the yearly industry-wide average churn was 24% for 2012, 2013, and 2015, and 23% for 2014. These calculations are based on the methodology described by the Commission in its 18th Mobile Competition Report. *See* Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993 (18th Mobile Competition Report), 30 FCC Rcd. 14515 at ¶ 20, n.43 (WTB 2015).

the three-year period.[194] The same survey also found that, among broadband users who have a choice of ISPs, nearly two-thirds (63%) "said it would be ***easy*** to switch providers, with 33% saying it would be very easy and 30% saying it would be somewhat easy."[195] Like the non-empirical evidence regarding the effect of transaction costs on switching that the Commission presented in the *Comcast* case, the "costs of switching" relied on by the Commission in the *Open Internet* and *Title II Orders* and by the court in *Verizon* and *USTA* are contradicted by empirical evidence that ***consumers routinely switch among different BIAS providers***.[196] To the extent the record in the *Open Internet Order's* proceeding lacked this empirical evidence of switching, that evidence was always readily available to the Commission. This time, the Commission should expressly consider it and reach the same conclusion as the court in *Comcast*.

The *Verizon* court also noted that, in the *Open Internet Order*, the Commission had cited consumers' lack of information regarding different BIAS providers' practices as a deterrent to switching. But in *Comcast*, the court concluded that an analogous Commission claim regarding a lack of consumer information regarding MVPD offerings "warrant[ed] little discussion."[197] The Comcast court was dismissive of the Commission's concern that cable consumers would "not switch providers to access new programming because they cannot know the quality of the programming before consuming it."[198] According to the court, "it is common knowledge that new video programming is advertised on other television stations and in other media, and can be previewed over the internet, thus providing consumers with information about the quality of competing

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[194] FCC, Working Paper, Broadband Decisions: What Drives Consumers to Switch – Or Stick With – Their Broadband Internet Provider, at 3 (Dec. 2010), available at https://apps.fcc.gov/edocs_public/attachmatch/DOC-303264A1.pdf.

[195] *See id.* (emphasis added).

[196] *See Verizon v. FCC*, 740 F.3d at 647 (citing switching costs from the *Open Internet Order* at ¶ 34).

[197] *See Comcast*, 579 F.3d at 7.

[198] *See Comcast*, 579 F.3d at 7.

services."[199] Even if knowledge of specific BIAS providers' practices would not otherwise be considered 'common knowledge,' the court's holding in *Comcast* indicates that the Commission's BIAS disclosure requirements are alone sufficient to allay concerns regarding the ability of consumers to switch.

In sum, according to the D.C. Circuit Court of Appeals' holding in *Comcast*, the Commission's conclusion that broadband consumers cannot readily switch among BIAS providers was arbitrary and capricious.

The *Title II Order's* conclusion that switching costs are too high for market forces to protect edge providers from anticompetitive behavior by BIAS providers is also inconsistent with the Commission's decision in *Orloff*[200] and the rationale in the D.C. Circuit Court of Appeals' decision upholding that decision.[201] The petitioner in this case argued that Verizon Wireless' practice of granting "sales concessions" to particular customers in Cleveland, Ohio violated the non-discrimination clause of 47 U.S.C. § 202(a) and Verizon's duty of "just and reasonable" practices under 47 U.S.C. § 201(b).[202] The Commission concluded[203] that Verizon's price discrimination was reasonable under both provisions because, "in a market as competitive as Cleveland's, market forces protected consumers from unreasonable discrimination" and unreasonable practices.[204] The Commission found there was "no evidence that any market failure prevented customers from switching carriers if they were dissatisfied," and that it was "unlikely that a carrier would have an incentive to engage in unreasonable discrimination where such conduct would result in a loss of customers."[205] In

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[199] *See Comcast*, 579 F.3d at 7.

[200] See *Orloff v. Vodafone Airtouch Licenses LLC*, 17 FCC Rcd. 8987 at ¶¶ 25-26 (2002) (*Orloff*).

[201] See *Orloff v.* FCC, 352 F.3d 415 (D.C. Cir. 2003).

[202] *See Orloff*, 352 F.3d at 417-18.

[203] *See Vodafone* at ¶¶ 20, 26.

[204] *Orloff*, 352 F.3d at 418.

[205] *Orloff* at ¶ 20.

its decision affirming the Commission, the court did not question the Commission's determination that the ability of consumers to switch among wireless providers was sufficient to prevent the providers from acting unreasonably.[206]

The Commission's finding that there was "no evidence" of market failure with respect to switching in *Orloff* indicates there is no evidence of market failure preventing customers from switching BIAS providers either. In 2002, when *Orloff* was decided, the Commission's empirical evidence regarding switching rates in the mobile industry was essentially the same as the switching evidence in the Commission's most recent report.[207] In 2002, the Commission reported that "most carriers report[ed] churn rates between 1.5 percent and 3 percent per month," and that approximately "30 percent of subscribers changed service providers each year" on and industrywide basis.[208] In 2016, the Commission reported a yearly average churn rate of approximately 24% on an industrywide basis for the years from 2012 to 2015, with approximate monthly churn for nationwide service providers ranging from a low of 1.1% to a high of 3.7%.[209]

The *Title II Order* failed to explain why an industrywide churn rate of 30% in 2002 did not constitute evidence of "any market failure prevent[ing] customers from switching carriers if they were dissatisfied,[210]" whereas the Commission concluded there was a switching market failure in 2015 despite a substantially similar industrywide churn rate of 24%. The lack of any explanation for this inconsistency is alone grounds for concluding that the *Title II Order's* analysis of switching costs was arbitrary and capricious.

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[206] *See Orloff*, 352 F.3d at 418.

[207] Compare *19th Mobile Competition Report* at ¶ 18, Chart II.B.6, with Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, 7th Report, FCC 02-179, 17 FCC Rcd. 12985, 13007 (2002) (7th Mobile Competition Report).

[208] *See 7th Mobile Competition Report* at 13007.

[209] *See 19th Mobile Competition Report* at ¶ 18, Chart II.B.6.

[210] *Orloff* at ¶ 20.

Impact of competition and the law of demand on BIAS

The *Title II Order's* analysis of consumer demand for broadband service is also arbitrary and capricious because it is fundamentally inconsistent with the economic theory of competition adopted by the Commission beginning in the 1970s and codified by Congress in the 1996 Act. The *Title II Order's* analysis of the need for prescriptive net neutrality rules is based on the "virtuous cycle" theory, which is in turn based on the notion that broadband ISPs, even in competitive markets, have the incentive and ability to reduce consumer demand for their own service offerings.[211] This notion contradicts the "'the most famous law in economics, and the one economists are most sure of,'" the law of demand[212] — the same law the *Comcast* court relied on when it concluded the Commission's horizontal limit on cable ownership was arbitrary and capricious.[213]

At its core, the virtuous cycle theory developed by the Commission in the *Open Internet Order* and relied on in the *Title II Order* describes a positive form of the economic principle commonly known as "network effects."[214] As applied by the Commission in those orders, the principle provides that the value of broadband networks increase with the number of "new" edge providers.[215] This principle suggests that ISPs have incentives of their own to promote the availability of a wide array of diverse and innovative content and applications on the broadband internet, because doing so would increase the value of their BIAS offerings. In a market subject to competition, the incen-

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[211] *See Title II Order* at ¶ 20.

[212] *See* Fred B. Campbell, Jr., *The First Amendment and the Internet: The Press Clause Protects the Internet Transmission of Mass Media Content from Common Carrier Regulation*, 94 NEB. L. REV. 559, 619 (2016) (quoting David R. Henderson, The Concise Encyclopedia of Economics: Demand, LIBR. OF ECON. & LIBERTY (2008), http://www.econlib.org/library/Enc/Demand.html.

[213] *See Comcast*, 579 F.3d at 6.

[214] *See United States v. Microsoft Corp.*, 253 F.3d 34, 49 (D.C. Cir. 2001) ("For example, '[a]n individual consumer's demand to use (and hence her benefit from) the telephone network . . . increases with the number of other users on the network whom she can call or from whom she can receive calls.'") (quoting Howard A. Shelanski & J. Gregory Sidak, *Antitrust Divestiture in Network Industries*, 68 U. CHI. L. REV. 1, 8 (2001)).

[215] *See, e.g., Open Internet Order* at ¶ 14 ("The Internet's openness is critical to these outcomes, because it enables a virtuous circle of innovation in which new uses of the network—including new content, applications, services, and devices—lead to increased end-user demand for broadband, which drives network improvements, which in turn lead to further innovative network uses.").

tive for a broadband ISP to increase demand for BIAS through positive network effects is strong because, as noted by the court in *Comcast*, the elasticities of supply and demand depend on the availability of competition.[216] As the Commission has long recognized in other contexts, when there are competitive alternatives, reducing demand for a networked service gives users incentives to switch to another network,[217] and, as detailed above, empirical data indicates there is no market failure that prevents consumers from switching among BIAS providers.

In a competitive market, ISPs' incentives to increase demand for their BIAS service offerings by promoting the positive network effects described by the virtuous circle theory — i.e., promoting access to applications and content — thus nullifies or offsets ISPs' incentives to discriminate against applications and content. This fact is implicit in the virtual cycle theory and the *Title II Order's* conclusion that "[t]he key drivers of investment are demand and competition."[218] Yet the *Title II Order* did not consider the impact of the law of demand on ISPs' incentives in markets that are subject to BIAS competition. It was arbitrary and capricious for the *Title II Order* to refuse to consider whether the "key drivers" of demand and competition would be sufficient to protect net neutrality principles in the absence of Title II regulation.

CONCLUSION

The *Title II Order's* interpretation of the term "telecommunications" is inconsistent with that term's plain language, canons of statutory construction, and the structure and purpose of the Communications Act. The Commission should conclude that, under *Chevron's* first step it is unambiguous that internet transmissions are not "telecommunications" as defined by the Act.

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[216] *See Comcast*, 579 F.3d at 6.

[217] *See* MTS & WATS Mkt. Structure, Third Report and Order, CC Docket No. 78-72, FCC 82-579, 93 F.C.C.2d 241, ¶¶ 11, 14 (Dec. 22, 1982).

[218] *Title II Order* at ¶ 412.

In addition, the Commission should expressly reject the *Title II Order's* "gatekeeper" theory of "bottleneck" economic power. The *Title II Order's* conclusion regarding switching costs is inconsistent with the available empirical evidence, court precedent on switching costs, and the law of demand. These inconsistencies render the *Title II Order* arbitrary and capricious as a matter of law.

Respectfully submitted,

TECH KNOWLEDGE

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